

CLAIMS

What is claimed is:

1. A refrigerator comprising:
a cool air generating part supplying cool air to first and second storage compartments;
upper and lower cabinets having the first and second storage compartments,
respectively, disposed therein; and
a shaft rotatably supporting the upper and lower cabinets .
2. The refrigerator according to claim 1, further comprising:
a table member provided on an upper part of the upper cabinet.
3. The refrigerator according to claim 2, wherein the table member is rotatable relative to the upper cabinet.
4. The refrigerator according to claim 3, wherein the table member is rotatably combined to the shaft.
5. The refrigerator according to claim 4, further comprising:
a base member disposed under the lower cabinet and supporting the shaft.
6. The refrigerator according to claim 5, wherein:
the cool air generating part is provided inside the base member; and
the shaft comprises:
a cool air supplying passage extending to the storage compartment of each of the cabinets, communicating with the cool air generating part, and supplying the cool air generated by the cool air generating part to the storage compartment of each of the cabinets, and a storage air exhausting passage exhausting air in the storage compartment of each of the cabinets to the cool air generating part.

7. The refrigerator according to claim 6, wherein the shaft comprises:
a first pipe; and
a second pipe coaxially provided around the first pipe and spaced apart from the first pipe; and
one of the cool air supplying passage and the storage air exhausting passage being formed inside of the first pipe, and a remaining one being formed between the first pipe and the second pipe.

8. The refrigerator according to claim 7, wherein the shaft further comprises:
cool air supplying outlets formed through the first pipe and the second pipe to communicate with corresponding storage compartments and supplying the cool air into the corresponding storage compartments; and
a storage air exhausting outlet formed on a side of the second pipe to communicate with corresponding storage compartments to exhaust the supplied cool air from the corresponding storage compartments.

9. The refrigerator according to claim 2, wherein:
the upper cabinet comprises:
a viewing window on an upper surface thereof so as to allow a view of an inside of at least one of the storage compartments; and
the table member provided such that the inside of the at least one storage compartment is viewable through the viewing window.

10. The refrigerator according to claim 5, further comprising:
a plurality of wheels supporting the base member.

11. The refrigerator according to claim 1, further comprising:
at least one middle cabinet provided between the upper and lower cabinets.

12. The refrigerator according to claim 10, further comprising:
at least one middle cabinet provided between the upper and lower cabinets.

13. The refrigerator according to claim 1, wherein the cool air generating part comprises:

a thermoelectric semiconductor element provided in at least one of the cabinets.

14. A refrigerator comprising:

a cool air generating part supplying cool air to a storage compartment;

a cabinet forming the storage compartment;

a shaft rotatably supporting the cabinet;

a table member provided in an upper surface of the cabinet; and

a plurality of wheels supporting the cabinet.

15. The refrigerator according to claim 14, further comprising:

a base member provided between the cabinet and the wheels.

16. The refrigerator according to claim 15, wherein the table member is rotatable relative to the cabinet.

17. The refrigerator according to claim 16, wherein:

the cool air generating part is provided inside the base member; and

the shaft comprises:

a cool air supplying passage extending to the storage compartment of the cabinet, communicating with the cool air generating part, and supplying the cool air generated by the cool air generating part to the storage compartment; and

a storage air exhausting passage exhausting air in the storage compartment to the cool air generating part.

18. The refrigerator according to claim 16, wherein the cabinet is provided with a viewing window on an upper surface thereof so as to allow a view of an inside of the storage compartment; and

the table member is provided such that an inside of the cabinet is viewable through the

viewing window.

19. The refrigerator according to claim 18, wherein the cool air generating part comprises:

a thermoelectric semiconductor element provided inside the cabinet.

20. A refrigerator including first and second cabinets therein, comprising:
first and second storage compartments disposed in the first and second cabinets, respectively;

a cool air generating part to supply cool air to the first and second storage compartments; and

a shaft supporting the first and second cabinets and allowing the first and second cabinets, respectively, to rotate around the shaft.

21. The refrigerator according to claim 20, wherein the first and second cabinets are stacked one cabinet on top of another cabinet.

22. The refrigerator according to claim 21, further comprising:

a table member provided on an upper part of the one top cabinet.

23. The refrigerator according to claim 22, wherein the table member is in a disk-like shape and is larger than an upper surface of the top cabinet.

24. The refrigerator according to claim 22, wherein the table member is incorporated with an upper surface of the top cabinet, or the upper surface of the top cabinet is the table member.

25. The refrigerator according to claim 23, further comprising:

a shaft combining part formed with table member such that a bottom center of the shaft combining part is rotatably combined with an upper end of the shaft which protrudes through the upper surface of the top cabinet.

26. The refrigerator according to claim 22, wherein the table member is transparent.
27. The refrigerator according to claim 22, wherein the table member is rotatable relative to the one top cabinet.
28. The refrigerator according to claim 22, wherein the table member is stationary relative to the shaft.
29. The refrigerator according to claim 22, wherein the table member is rotatably combined to the shaft.
30. The refrigerator according to claim 21, further comprising:
a base member disposed under the other cabinet to support the shaft.
31. The refrigerator according to claim 20, wherein the shaft comprises:
a supply passage to supply cool air to the storage compartment of each cabinet from the cool air generating part; and
an exhaust passage to exhaust air from the storage compartment of each cabinet to the cool air generating part.
32. The refrigerator according to claim 30, wherein the cool air generating part is disposed in the base member.
33. The refrigerator according to claim 31, wherein:
the supply passage comprises:
a first pipe; and
the exhaust passage comprises:
a second pipe coaxially provided around the first pipe, one of the first and second pipes to allow supply air to pass from the cool air generating part to each of the storage compartments and a remaining one of the first and second pipes to allow exhaust air to pass

from each of the storage compartments to the cool air generating part.

34. The refrigerator according to claim 33, wherein the shaft further comprises:
cool air supplying outlets formed through the first pipe and the second pipe to
communicate with corresponding ones of the first and second storage compartments and
supplying the cool air to the corresponding ones of the first and second storage compartments;
and

a storage air exhausting outlet formed on a side of the second pipe to communicate with
corresponding ones of the first and second storage compartments and exhausting the cool air
supplied to the corresponding ones of the first and second storage compartments to the cool air
generating part.

35. The refrigerator according to claim 20, wherein:
the first cabinet comprises:
a viewing window on an upper surface thereof so as to allow a view of an inside
of the storage compartment corresponding to the first cabinet; and
the table member is provided such that the inside of the storage compartment
corresponding to the first cabinet is viewable through the viewing window.

36. The refrigerator according to claim 30, further comprising:
a plurality of wheels supporting the base member.

37. The refrigerator according to claim 20, further comprising:
at least one middle cabinet provided between the first and second cabinets.

38. The refrigerator according to claim 20, wherein the at least one middle cabinet is
provided with at least one middle storage compartment.

39. The refrigerator according to claim 30, wherein the cool air generating part
comprises:
a thermoelectric element provided in at least one of the cabinets and of the base

member.

40. The refrigerator according to claim 39, wherein the cool air generating part comprise:

a thermoelectric element;

a cold sink disposed adjacent one surface of the thermoelectric element; and

a heat sink disposed adjacent another surface of the thermoelectric element.

41. The refrigerator according to claim 40, further comprising:

a first cooling fan to blow the cool air cooled by the cold sink to supply cool air to the corresponding ones of the plural storage compartments;

a second cooling fan to blow the air from around the heat sink to an outside of the refrigerator so as to cool the heat sink; and

a plurality of through holes formed on a bottom of the base member adjacent to the second cooling fan so as to circulate air therethrough.

42. The refrigerator according to claim 20, wherein each of the cabinets is in a shape of a cylinder.

43. The refrigerator according to claim 20, wherein each of the cabinets is in a shape of a polygon.

44. The refrigerator according to claim 39, wherein a temperature of each of the storage compartments is individually controllable by providing the cool air generating part inside each of the cabinets.

45. The refrigerator according to claim 20, wherein the cool air generating part is disposed on a side of the storage compartment.

46. A refrigerator including plural cabinets therein, comprising:

plural storage compartments disposed in the plural cabinets, respectively;

plural cool air generating parts, respectively, disposed on a side of each of corresponding ones of the plural storage compartments to supply cool air to the corresponding ones of the plural storage compartments; and

a shaft supporting the plural cabinets and allowing the plural cabinets, respectively, to rotate around the shaft.

47. The refrigerator according to claim 46, wherein each of the cool air generating parts comprise:

a thermoelectric element;

a cold sink disposed adjacent to one surface of the thermoelectric element facing the respective storage compartment; and

a heat sink disposed adjacent to another surface of the thermoelectric element facing away from the respective storage compartment.

48. The refrigerator according to claim 47, further comprising:

a first cooling fan to blow the cool air cooled by the cold sink to supply cool air to the corresponding ones of the plural storage compartments;

a second cooling fan to blow the air from around the heat sink to an outside of the refrigerator so as to cool the heat sink;

a partition wall partitioning respective ones of the plural storage compartments from the respective ones of the plural cool air generating part; and

a plurality of through holes is formed disposed adjacent to the second cooling fan through which air is circulated.